

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of controlling an engine having a valve actuator, comprising:

sensing a first parameter indicative of a first temperature of the engine;

sensing a second parameter indicative of a second temperature of the engine;

enabling the valve actuator to implement a variation on ~~conventional~~ timing of an engine intake valve actuation timing and limiting an amount of fuel injected into a cylinder of the engine in response to one of the first and second temperatures being above a predetermined value~~[[;]]~~ and

~~limiting an amount of fuel injected into a cylinder of the engine when the~~
other of the first and second temperatures ~~[[is]]~~ being below a predetermined value.

2. (Currently Amended) The method of claim 1, further including ceasing to limit the amount of fuel injected into the cylinder of the engine in response to each of the first and second temperatures each being above a predetermined value.

3. (Original) The method of claim 1, wherein the first temperature is an engine coolant temperature and the second temperature is an intake manifold temperature.

4. (Currently Amended) The method of claim 3, further including enabling the valve actuator when the engine coolant temperature is above ~~[[the]]~~ a predetermined value and the intake manifold is below ~~[[the]]~~ a predetermined value.

5. (Currently Amended) The method of claim 3, further including disabling the valve actuator when the engine coolant temperature is below ~~[[the]]~~ a predetermined value.

6. (Currently Amended) The method of claim 1, wherein ~~[[the]]~~ a predetermined value is 20° C.

7. (Original) The method of claim 1, further including closing a control valve to enable the valve actuator.

8. (Currently Amended) The method of claim 3, further including enabling the valve actuator to implement a variation on a ~~conventional~~ timing of the engine intake

valve actuation timing and enabling a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator when at least the coolant temperature is above a predetermined value.

9. (Original) The method of claim 8, further including limiting an amount of fuel injected into a cylinder of the engine and an amount of torque generated by the engine when the valve actuator is not operating properly.

10. (Cancelled).

11. (Currently Amended) The method of claim 1, further including limiting an amount of torque generated by the engine when one of the first and second temperatures are below ~~[[the]]~~ a predetermined value.

12. (Currently Amended) A valve actuation system for an engine having an intake valve moveable between a first position where the intake valve prevents a flow of fluid and a second position where the intake valve allows a flow of fluid, comprising:

a valve actuator adapted to selectively engage the intake valve to prevent the intake valve from returning to the first position;

a first sensor adapted to sense a first temperature of the engine;

a second sensor adapted to sense a second temperature of the engine; and
a controller adapted to engage the valve actuator with the intake valve and to
limit an amount of fuel injected into a cylinder of the engine when one of the first and
second temperatures is above a predetermined value and ~~to limit an amount of fuel~~
~~injected into a cylinder of the engine when~~ the other of the first and second
temperatures is below a predetermined value.

13. (Currently Amended) The system of claim 12, wherein the controller is
adapted to cease limiting the amount of fuel injected into the cylinder of the engine
when ~~each of~~ the first and second temperatures are each above a predetermined value.

14. (Original) The system of claim 12, wherein the first sensor is adapted
to sense the temperature of an engine coolant and the second sensor is adapted to
sense the temperature of an intake manifold.

15. (Currently Amended) The system of claim 14, wherein the controller is
adapted to enable the valve actuator when the engine coolant temperature is above
[[the]] a predetermined value and the intake manifold temperature is below [[the]] a
predetermined value, and adapted to disable the valve actuator when the engine
coolant temperature is below [[the]] a predetermined value.

16. (Original) The system of claim 12, further including a control valve moveable between a first position where the valve actuator is enabled and a second position where the valve actuator is disabled.

17. (Currently Amended) The system of claim 14, further including a detection system adapted to determine whether the valve actuator is operating properly, wherein the controller is configured to enable the valve actuator to implement a variation on a conventional engine valve actuation timing and to enable the detection system when at least the coolant temperature is above ~~[[the]]~~ a predetermined value.

18. (Currently Amended) An engine system, comprising,
an engine block defining a cylinder;
a piston slidably disposed within the cylinder, the piston moveable between a top dead center position and a bottom dead center position;
a fuel injection system adapted to inject a quantity of fuel into the cylinder;
an intake valve operatively associated with the cylinder and moveable between a first position where the intake valve prevents fluid from flowing relative to the cylinder and a second position where a flow of fluid is allowed to flow relative to the cylinder;
a valve actuator adapted to selectively engage the intake valve to prevent the intake valve from returning to the first position;
a first sensor adapted to sense a first temperature of the engine;
a second sensor adapted to sense a a second temperature of the engine; and

a controller adapted to engage the valve actuator with the intake valve and to limit an amount of fuel injected into a cylinder of the engine when one of the first and second temperatures is above a predetermined value, ~~to limit an amount of fuel injected into a cylinder of the engine~~ and when the other of the first and second temperatures is below a predetermined value, and to cease limiting the amount of fuel injected into the cylinder of the engine when ~~each of the first and second temperatures are~~ each above a predetermined value.

19. (Original) The engine system of claim 18, wherein the first sensor is adapted to sense the temperature of an engine coolant and the second sensor is adapted to sense the temperature of an intake manifold.

20. (Currently Amended) The engine system of claim 19, wherein the controller is adapted to enable the valve actuator when the engine coolant temperature is above ~~[[the]]~~ a predetermined value and the intake manifold temperature is below ~~[[the]]~~ a predetermined value, and adapted to disable the valve actuator when the engine coolant temperature is below ~~[[the]]~~ a predetermined value.

21. (Original) The engine system of claim 18, further including a control valve moveable between a first position where the valve actuator is enabled and a second position where the valve actuator is disabled.

22. (Currently Amended) The engine system of claim 18, further including a detection system adapted to determine whether the valve actuator is operating properly, wherein the controller is configured to enable the valve actuator to implement a variation on a conventional engine valve actuation timing and to enable the detection system when at least the coolant temperature is above ~~[[the]]~~ a predetermined value.

23. (Original) The engine system of claim 18, further including a cam assembly connected to the intake valve and adapted to move the intake valve between the first and second positions.

24. (Currently Amended) The engine system of claim 18, wherein the controller is adapted to limit the quantity of fuel injected into the cylinder when ~~each of~~ the first and second temperatures are each below ~~[[the]]~~ a predetermined value.

25. (Currently Amended) A valve actuation system for an engine having an intake valve moveable between a first position where the intake valve prevents a flow of fluid and a second position where the intake valve allows a flow of fluid, comprising:

a valve actuator adapted to selectively engage the intake valve to prevent the intake valve from returning to the first position;

a first sensor adapted to sense a first temperature of the engine and to deliver a first signal indicative of the first temperature;

a second sensor adapted to sense a second temperature of the engine and to deliver a second signal indicative of the second temperature; and

a controller adapted to receive the first and second signals and to engage the valve actuator with the intake valve and to limit an amount of fuel injected into a cylinder of the engine when one of the first and second temperatures is above a predetermined value ~~and to limit an amount of fuel injected into a cylinder of the engine~~ and when the other of the first and second temperatures is below a predetermined value:

26. (Currently Amended) The system of claim 25, wherein the controller is adapted to cease limiting the amount of fuel injected into the cylinder of the engine when ~~each~~ of the first and second temperatures are each above a predetermined value.

27. (Original) The system of claim 25, wherein the first sensor is adapted to sense the temperature of an engine coolant and the second sensor is adapted to sense the temperature of an intake manifold.

28. (Currently Amended) The system of claim 27, wherein the controller is adapted to enable the valve actuator when the engine coolant temperature is above ~~[[the]]~~ a predetermined value and the intake manifold temperature is below ~~[[the]]~~ a

predetermined value, and adapted to disable the valve actuator when the engine coolant temperature is below ~~[[the]]~~ a predetermined value.

29.(Original) The system of claim 25, further including a control valve moveable between a first position where the valve actuator is enabled and a second position where the valve actuator is disabled.

30.(Previously Amended) The system of claim 27, further including a detection system adapted to determine whether the valve actuator is operating properly, wherein the controller is configured to enable the valve actuator to implement a variation on a conventional engine valve actuation timing and to enable the detection system when at least the coolant temperature is above the predetermined value.

31.(Currently Amended) The method of claim 1, further including:
enabling a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator; and
generating a fault condition when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system detects improper operation after having determined proper operation of the valve actuator.

32. (Currently Amended) The method of claim 1, further including:

enabling a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator; and

ceasing to limiting the amount of fuel injected into the cylinder when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system determines proper operation of the valve actuator.

33. (Currently Amended) The valve actuation system of claim 12, wherein the controller is further configured to enable a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator, and to generate a fault condition when both the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system detects improper operation after having determined proper operation of the valve actuator.

34. (Currently Amended) The valve actuation system of claim 12, wherein the controller is further configured to enable a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator, and

to cease limiting the amount of fuel injected into the cylinder when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system determines proper operation of the valve actuator.

35. (Currently Amended) The engine system of claim 18, wherein the controller is further configured to enable a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator, and to generate a fault condition when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system detects improper operation after having determined proper operation of the valve actuator.

36. (Currently Amended) The engine system of claim 18, wherein the controller is further configured to enable a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator, and

to cease limiting the amount of fuel injected into the cylinder when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system determines proper operation of the valve actuator.

37. (Currently Amended) The valve actuation system of claim 25, wherein the controller is further configured to enable a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator, and to generate a fault condition when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system detects improper operation after having determined proper operation of the valve actuator.

38. (Currently Amended) The valve actuation system of claim 25, wherein the controller is further configured to enable a valve operation detection system to monitor the operation of the valve actuator to determine proper operation of the valve actuator, and

to cease limiting the amount of fuel injected into the cylinder when ~~both~~ the first and second temperatures are each above ~~[[the]]~~ a predetermined value and the valve operation detection system determines proper operation of the valve actuator.